Altair™ 8800b Turnkey Model

The Altair 8800b Turnkey Model is designed for those who want the convenience, security and simplicity of operation provided by the front panel's key-locked power switch. The Turnkey Model (like the full front panel Altair 8800b) is a general-purpose byte-oriented computer containing 78 basic machine language instructions. The Turnkey will support up to 64K of directly addressable memory and the 100-pin bus structure allows expansion of up to 256 separate input/output devices.

System Design

The 8800b Turnkey Model is comprised of a special Turnkey Module board, a Central Processing Unit (CPU) board and a Power Supply board.

A serial input/output (SIO) interface, 1K of RAM, a sense switch input and provisions for 1K of PROM are included on the **Turnkey Module board.** The SIO allows RS-232, TTL or TTY interfacing. The Auto Start Circuit automatically branches to a predetermined address when power is applied or when the Reset switch is activated.

By means of the 8080A microprocessor circuit, the master timing circuit and 8 input and output data lines, the **CPU board** controls and processes all instruction data within the computer. Clock pulse widths, phasing and frequency are all crystal-controlled by the Intel 8224 clock generator IC which uses an external crystal.

The **Power Supply board** provides pre-regulated positive and negative 18 volt supplies to the computer bus. The 8-volt, 18 amp tapped secondary supply permits the addition of as many as 16 printed circuit boards, and the multiple tapped primary transformer allows 110v/50Hz or 220v/60Hz operation.

Options

8800b Turnkey options include:

1) the Disk Boot Loader which loads Disk BASIC;
2) the Multiboot Loader which loads programs from cassette or paper tape;
3) the Turnkey PROM Monitor, a 256-byte PROM chip, that offers these functions:
   a. M—memory contents examine and modify
   b. D—memory dump
   c. J—jump to an address

Specifications

Number of Boards	Up to 18
NMOS 8080A Microprocessor	
Data Word Size	8 bits
Instruction Word Size	Variable, 8-24 bits
Clock Frequency	2MHz
Add Time, Register to Register	2 μs. per data word
Number of Instructions	78
Input/Output Control	
I/O Word Size	8 bits
Number of I/O Channels	256
Direct Memory Access	Optional
Interrupt Capability	Standard
Vectored Interrupt (8 priority levels)	Optional
Software (sold separately)	
BASIC	High-level language
Package II	Assembly Language Development System
Disk Operating System	

mits

2450 Alamo S.E. / Albuquerque, New Mexico 87106